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RESEARCH

AT WORK



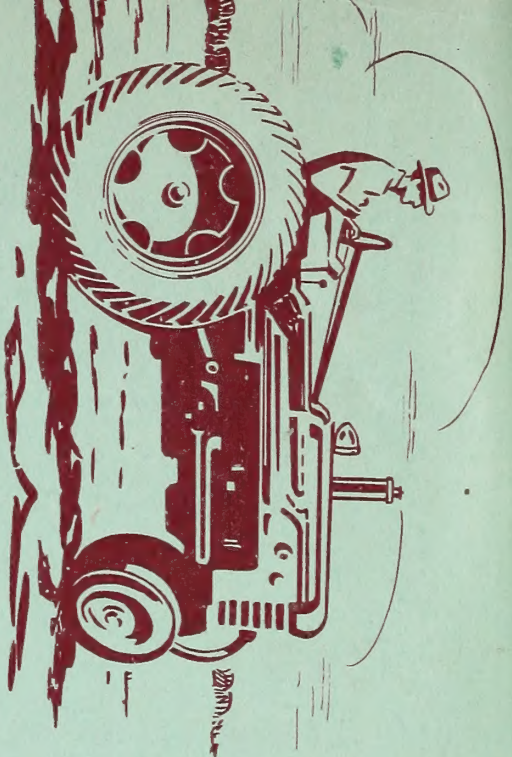
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U.S. DEPARTMENT OF AGRICULTURE

From Farm to You

**SOME TYPICAL EXAMPLES OF WORK
UNDER THE RESEARCH AND MARKETING ACT**

UNITED STATES DEPARTMENT OF AGRICULTURE, WASHINGTON, D.C.

SEPTEMBER 1949



WHY THIS LEAFLET?

The Agricultural Research Policy Committee, members of RMA commodity advisory committees, representatives of farm organizations, and others who are cooperating in the various phases of the RMA program have asked for a simple statement of the over-all purposes and activities under the Research and Marketing Act. This leaflet is designed to serve that need. Examples of research mentioned here are only to indicate some typical lines of work under way.

RMA RESEARCH REACHES

WHAT IS THE RMA?

RMA means the Research and Marketing Act of 1946, Public Law 733.

The act, passed unanimously by both Houses of the Seventy-ninth Congress and signed by the President on August 14, 1946, provides for a greatly expanded program of agricultural research and services in which the United States Department of Agriculture, the State experiment stations, the State extension services, the State departments of agriculture, and other public and private agencies can cooperate.

The intent of the act, as stated by the Congress, is to put agricultural research on a par with research by industry in order to reach a balance between agriculture and the rest of the national economy. The act directs and provides that new emphasis be given to marketing research and services that will improve our system for distributing and marketing agricultural products. Although many new lines of work are being undertaken under the Research and Mar-

keting Act, they are all integrated with the over-all Federal-State agricultural research program.

Some of the main differences between the RMA and other agricultural legislation are as follows:

1. Not less than 20 percent of the direct-grant funds to State experiment stations must be applied to marketing research; up to 25 percent of the funds may be used for regional research by two or more States, as recommended by a duly established committee of nine persons representing the experiment stations.

2. The United States Department of Agriculture is for the first time given practical authority to contract with public or private agencies to conduct research. Also, for the first time the Department can, on a fund-matching basis, enter into cooperative agreements with State departments of agriculture and bureaus of markets to do marketing service types of work.

3. The act makes it quite clear that marketing research and services should apply to all phases of

distribution and marketing, from the grower to the housewife or other ultimate consumer.

4. A national advisory committee (known as the Agricultural Research Policy Committee) is established to consult with the Secretary of Agriculture and other Department officials concerning research and service work under the act. The appointment of appropriate commodity and functional advisory committees is also authorized.

Actual research and service work as authorized under the act is conducted by or is under the direction of existing agencies of the Department of Agriculture and State agricultural institutions. Responsibility for administration of the Research and Marketing Act was transferred to the Administrator of the Agricultural Research Administration on August 1, 1949. Prior to that time it was administered in the office of the Secretary of Agriculture.

From an operating standpoint the fields of work fall into three separate categories: Production, new and wider uses of agricultural products and byproducts, and marketing research and services.

A THREEFOLD FEDERAL-STATE RESEARCH PROGRAM

Production Research

Research in this field is aimed mainly at helping farmers to obtain more efficient production from their land. In general, it should provide information that will directly help the farmer improve his crops and livestock, and to use methods of farming

tural production in this country has gone up about a third during the past decade.

We are in an era of abundance. So the development of new and extended uses in homes, on farms, and by industry of the prospective continuing abundant farm production is the specific goal of section 10 (a), title I, of the Research and Marketing Act.

much, if any, can producer-to-consumer marketing costs be reduced through greater efficiency and other improvements in handling farm products? What are the preferences of consumers? Are consumers adequately supplied with current marketing information? Examples of marketing research and services are presented on pages 8 and 9.

FROM THE FARMER TO THE CONSUMER

that are best for his land and for his and the Nation's economy.

The Research and Marketing Act encourages expansion of this kind of work by the Department and the State agricultural experiment stations. Aside from additional allotment of direct-grant funds to the experiment stations for this purpose (sec. 9, title I) the Department, under another section of the act (sec. 10 (b), title I), is allotted funds for research other than utilization, with the proviso that it be used only in cooperation with one or more of the stations or with agencies mutually agreeable to the Department and the experiment stations concerned. (See pages 4 and 5 for some examples of this type of work.)

New and Wider Uses

New uses for farm products offer one of the greatest hopes to the farmer for making use of the increasing production of American farms. Agricultural

To more fully use existing facilities for conducting utilization research, the Secretary of Agriculture is authorized to contract with any qualified public or private agency to do such research if he finds that it can thus be done more effectively, quicker, or at less cost. Some examples of utilization research are given on pages 6 and 7.

Marketing Research and Services

How to make products of the farm more accessible to consumers at prices that are fair to both consumers and producers is one of the biggest problems facing agriculture today. Congress recognized this need by providing in title II of the act ways and means for sharply increasing marketing research and service work.

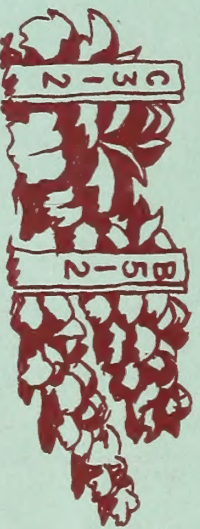
Whereas production research is centered on the farm, much of the research on marketing centers on how products reach the consumer—what are the present costs along the marketing channels? How



RESEARCH AT THE FARM MEANS A



THE LAND



CROPS



ANIMALS

The LAND is our basic resource. The very survival of our nation depends upon the continued productivity of the soil. Much has been learned in recent years about the soil and how best to use it but there are many special problems to which we still do not have the answers.

A project under the Research and Marketing Act aims to determine the influence of certain mineral deficiencies in soils. Results should increase the accuracy of recommendations concerning the use of fertilizers.

The level of the water table is getting lower in some parts of the country and it seriously concerns irrigation farmers. Studies are in progress to learn more about factors that affect the downward movement of water into the soil, as a step toward maintaining or preventing a further drop in the water table level.

Drought holds the ever-present threat of dust storms. Working under a Research and Marketing Act project at Manhattan, Kans., scientists have built a "wind tunnel" for research on how the wind tears loose and carries away the soil. This tunnel, somewhat like wind tunnels that are used to test airplanes, will provide information now on the behavior of dust storms, so that scientists will not have to wait for the storms themselves to get facts that should help to lessen the destructive effects of drought.

PLANT BREEDERS know and everyone should realize that new life continuously needs to be injected into our plant crops if farmers are to produce high quality products efficiently. Thus a germ plasma bank for plants is as important to the plant breeder as the blood bank is to human life.

Nearly all of our important farm crops are of foreign origin and this is still the most important source of plant material for improving the crops we have or for developing new crops of possible economic importance, such as soybeans.

Five expeditions have been authorized under the Research and Marketing Act to seek foreign plants of potential value to American agriculture. More than 12,000 collections have already been returned to the United States, about 9,000 of which have been made available to the States for testing. The plants are being acclimated and bred into our domestic strains in cooperation with State experiment stations in 43 States and Hawaii. The determination and preservation of valuable breeding stocks for future use is an important part of this work.

It will take years and many trials to bring the full benefit of this research to the farmer. It is a type of work, however, the farmer himself cannot do, but it must be done if he is to keep ahead of disease, insect, and other natural hazards and maintain his increasingly competitive position in the economy of this country.

STERILITY and other reproductive troubles in dairy cattle cost farmers of this country an estimated 250 million dollars a year. The cause of infertility in cows and problems concerning the ability of young sires to transmit fertility and high productivity to their offspring is the objective of a Research and Marketing Act study. Experiment stations of the Eastern and Northeastern States are cooperating with the United States Department of Agriculture in this work.

Largely because of the warm, humid climate of the Southern States, milk cows there on the average produce about 3,400 pounds of milk per year as compared with about 5,000 pounds per cow for the country as a whole. In a cooperative project researchers will see what can be accomplished by crossbreeding, inbreeding, and outbreeding toward developing a cow that will produce more milk under climatic conditions of the South. One phase of this work is the crossing of heat-resistant red Sindhi bulls from India with Jerseys and other local dairy breeds.

Thirty-five to 40 percent of our young pigs die before they reach weaning age. Why? The United States Department of Agriculture, cooperating with the experiment stations of Indiana, Michigan, Minnesota, and Illinois is seeking the answer or answers to that question. Research will apply to such factors as management, nutrition, breeding, infectious diseases, and parasites.

BETTER STANDARD OF LIVING FOR US ALL

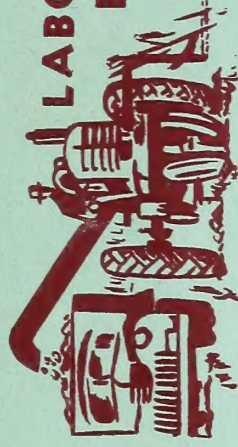


MORE AND BETTER FOOD

THE END OBJECTIVE of much of the production research under the RMA is more and better food for today and tomorrow. To achieve this goal the researcher and farmer will need to combine their talent and toil to provide an adequate and continuous supply of the kinds of foods that add up to healthful diets—fresh milk, meat, fruits, vegetables, bread, and the like.

Research has done a good job about this in the past. But new and more complex problems continue to arise. Wonderful insecticides, fungicides, and herbicides have been developed and are being widely used. But there is some concern about the possible long-time adverse effects of these chemicals on soils, plants, and animals and, in turn, what effect this might have on the quality or even quantity of food produced. An extensive study of the problems is being made under the Research and Marketing Act.

Control of certain virus diseases of stone fruits and strawberries, eradication or control of the golden nematode of potatoes, higher milk production through better and more efficient use of feeds, how to prevent sheep from getting parasites or parasitic diseases are other objectives of work being conducted cooperatively by agencies of the United States Department of Agriculture and State experiment stations. Successful effort along these lines would certainly help to guarantee a supply of the kinds and quantities of food we want.



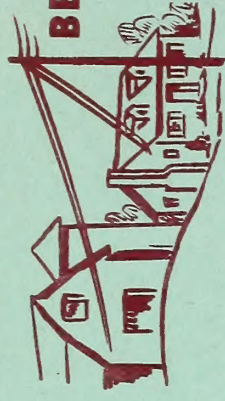
LABOR-SAVING EQUIPMENT

THE RAPID SHIFT in recent years to mechanical power and other mechanized equipment is one of the most significant changes that has taken place in American agriculture. It has lessened the burden of farm work by eliminating to a considerable degree the drudgery of hand labor. Moreover, the better timing of farm operations through mechanization results in lower costs, greater total production, and a higher quality of farm products.

Some of our machines and equipment, however, are still in the experimental stage; some of them are not adapted to a sufficiently wide range of conditions; others are still in the blueprint stage but there is general agreement that they should become realities as the need for them becomes more obvious.

The Research and Marketing Act provides for further research toward developing new and more efficient uses for farm machinery and equipment, including the use of electricity and other forms of power.

One project in this field aims to develop equipment for producing and harvesting cotton on small farms that have only 20 acres or so in cotton and to improve such equipment for use on larger farms. Special phases will have to do with working out better methods and equipment for seedbed preparation, delinting of cottonseed for planting, weed control, and less laborious means of applying insecticides and fungicides.



BETTER FARM BUILDINGS

GREATER COMFORT, efficiency, and economy in farm houses and other buildings is the goal of research being undertaken cooperatively by agencies of the United States Department of Agriculture and State experiment stations throughout the country.

To determine space and facility needs in farm houses, information is being obtained which is based on an analysis of farm family activities. This information will be used in developing design standards for rural houses which increase efficiency and livability and will permit greater economy in construction.

Under another project studies are in progress to learn more about the functional requirements of farm buildings other than the dwelling, to determine what materials are most suitable, to develop improved and lower cost designs and construction methods, and to improve equipment that is used in farm buildings. A rather timely phase of this study, undertaken in 1948, had to do with improved grain bins for farm storage, with particular reference to adapting them for drying shelled corn while in the bin.

Another specific commodity goal is the development of new types of structures, equipment, and practices for curing bright-leaf tobacco that will cut down labor and fuel costs, improve quality, and be better suited to general farm needs than those now generally used.



NEW AND WIDER USES

RESEARCH has shown that the conversion of farm crops to new uses offers a potentially large outlet for such crops and many of the byproducts that often go to waste. Under the Research and Marketing Act extensive research is directed at developing entirely new uses for cotton, including new and improved products and ways of making better products from cotton fiber. Improved equipment and methods are being sought for ginning and related processes that



FEED FROM WASTES

Results of a feeding study with dairy cows in the South show that a concentrate mixture, made up entirely of byproducts from southern crops, produced as much milk and cost less than a standard mixture containing 70 percent of grains.

In this Research and Marketing Act study, two feeding experiments were conducted, one at the Dairy Field Experiment Station, Lewisburg, Tenn., and the other at the Coastal Plains Station, Willard,



FOOD FROM WASTES

Some 40 billion pounds of skim milk and 10 billion pounds of whey are produced in this country each year. Only a small fraction of it is now converted to food or any other useful purpose. This represents not only waste of a lot of potentially nutritious food, but it creates a serious disposal problem for the dairy industry.

An effort is being made under a Research and Marketing Act study to develop better methods for

RESEARCH ON NEW USES OF FARM PRODUCTS

will cut down losses and increase the salability of cotton and cottonseed.

The conversion of certain surplus and damaged grain crops to industrial alcohol may offer a possible large-scale emergency outlet for these crops. One phase of Research and Marketing Act work in this field is aimed at evaluating in experimental and full-scale automotive and other engines the merits of grain alcohol as motor fuel.

New and better farm uses of farm-grown timber is another objective. Experiments conducted in two farm areas of Minnesota showed that home-grown lumber is satisfactory for many purposes, particularly for framing and roof boards of granaries, garages, etc.

The improvement of oilseed processing methods, increasing flavor stability of soybean oil, and modification of domestically produced vegetable oils to meet special industrial requirements, are other current Research and Marketing Act objectives in the utilization field.

N. C. The byproducts mixture consisted of 375 pounds each of dried citrus pulp and dehydrated sweetpotatoes, and 125 pounds each of peanut meal and cottonseed meal. The grain mixture with which the experimental feed was compared, in 30-day tests on two balanced groups of milking Jerseys, consisted of 400 pounds of corn meal, 300 pounds of ground oats, 200 pounds of wheat bran, and 100 pounds of cottonseed meal.

Average production of the cows fed the byproduct mixture was 22.8 pounds of 4-percent milk per day per cow as compared with 22.7 pounds for those fed the grain mixture. The cost of ingredients in the experimental mixture in January 1948 was \$75.04 a ton; the grain mixture, \$94.32. On the total-digestible-nutrient basis, the grain mixture cost about 27 percent more than the feed made from byproducts.

When these facts become widely known more southern byproducts will no doubt be fed to dairy cattle, especially in areas where the feeds are produced.

concentrating milk, skim milk, and whey so they will be more suitable for use in various foods. Methods of incorporating them in bakery goods, precooked dried cereals, macaroni, and confections are also being sought.

Work is in progress to develop new types of ice cream and sherbets in which more nonfat milk solids can be used. Results so far indicate that high-grade buttermilk, in fluid or dried form, will make good ice cream and that cheese wheys, including acid cottage cheese, will produce satisfactory sherbets. Scientists discovered that the natural acidity of cottage-cheese whey replaces the expensive citric or lactic acid usually added to sherbets.

Another project deals with problems in manufacturing foreign-type cheeses which so far have not been made from pasteurized milk. Efforts will also be made to use whey proteins in mold-ripened cheeses and other types of cheese and cheese spreads.



MEDICINE

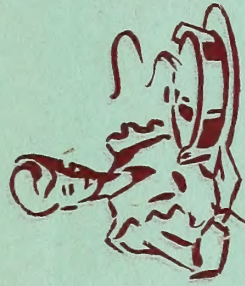
FOR MANY YEARS Department research has made important contributions to the science of human medicine. The spectacular success in the past moves all question about the desirability of further work toward developing antibiotics from agricultural sources.

The value of penicillin, for example, is well known. Its availability at reasonable cost was made possible by United States Department of Agriculture scien-

tists who developed a process for large-scale commercial production. The current production rate is 126,000 times greater than during the first 6 months of 1943. Annual value of penicillin at prescription counters and hospital dispensaries is estimated at 150 million dollars. Research on it cost about \$100,000 of public funds. Waste products from the grain and dairy industries are the bases of penicillin production.

Tomatin, a substance extracted from tomato plants, is promising as a factor in disease resistance of plants. Rutin, a highly valued drug in strengthening weakened capillaries, comes from young green buckwheat.

These are only a few of the many examples that could be cited. Perhaps they represent only a small part of what might be done in this field. Under the Research and Marketing Act new impetus is being given to this work under a project entitled: Production of Antibiotics from Agricultural Sources.



NUTRITION

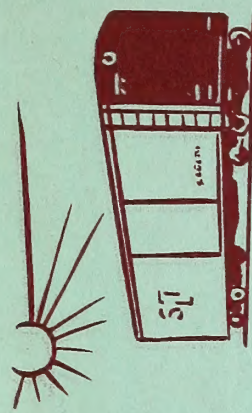
A WELL-FILLED human stomach does not always signify a well-fed person. To a large extent the quality and volume of a person's diet depends on income but it is not the only limiting factor. Too often people who can afford to buy all the food they want do not get the kinds of food they need for good health. The cause is usually poor food habits or simply lack of knowledge as to what a well-balanced nutritious diet is.

The science of nutrition is relatively new and there are many still unanswered questions on the subject. Therefore, in line with this country's program of abundance, it is all the more imperative that nutrition research be directed without further delay toward making that abundance contribute to our better health.

A Research and Marketing Act project is under way to obtain more background information as to what kinds and quantities of foods and nutrients are needed by individuals of different age, sex, environment, origin, and physical activity.

A related study is directed at determining the potential outlets for foods as indicated by current dietary habits of families in the United States.

The over-all objective of another study is to bring about greater use of foods for which an expanded market is needed, through new recipes and more varied ways of using such foods.



FIGHTING SPOILAGE

STEM END rot of citrus fruit, bacterial soft rot of vegetables, blue mold rot and gray mold rot of apples and pears, and various other diseases take a tremendous annual toll of these fruits and vegetables while being transported to market.

The prevention or control of this spoilage is the goal of an intensive Research and Marketing Act study. The demand for and use of fresh produce would undoubtedly be increased if its condition and

appearance were better when it meets the shopper's eye in the retail store.

Quality preservation in prepackaged fruits and vegetables is the objective of another intensive Research and Marketing Act study. Findings that have already come from actual tests include:

Sweet corn and broccoli may be prepackaged in Florida and shipped satisfactorily to northern markets. Mechanical cooling units in trucks were found to be more satisfactory for the purpose than ice bunkers;

Pears packaged in consumer-sized corrugated-paper boxes responded to temperature changes as rapidly as those in standard pear boxes, indicating the possibility of ripening carloads of packaged pears at the terminal market.

In the prepackaging of tomatoes, peaches, corn, and other vegetables, the importance of ventilating the packages has been demonstrated.

MEANS MORE MARKETS FOR ABUNDANT PRODUCTION —

RESEARCH ON MARKETING MEANS BETTER RETURNS TO



MARKET REPORTS

IF MARKET REPORTING is to provide maximum benefit to growers and distributors of farm commodities, more basic information will need to be obtained on production, consumption, movements, and prices, for certain products for which satisfactory facts are not now available.

This is the objective of a rather comprehensive Research and Marketing Act study which includes the collection and reporting of information on the consumption of fluid milk and cream; the number and types of cattle on feed; chick movement into broiler areas; acreage, production, and stocks of vegetable seeds and naval stores; potato storage supplies; flaxseed stocks, and many other items.

To improve the effectiveness of wholesale-market news service a study is being made to determine what changes might be needed in the content of market news releases, the methods of presentation and distribution, and the commodities and markets covered. It is hoped that the results will give producers, marketing agencies, and consumers a better idea of supply and demand conditions. Another phase of this work is to develop a cooperative program with State agencies for more effectively publicizing the availability of abundant supplies of perishable commodities.

The possibilities and merits of establishing a retail market news service are also being explored.



FOREIGN TRADE

ALTHOUGH an increasing proportion of United States farm production has been absorbed in domestic markets by our rising population and a better standard of living, exports are still a highly significant factor in total United States farm income.

As a part of an over-all program to expand markets for United States agricultural production, commodity specialists have been assigned to work in this country and abroad to stimulate foreign demand for our cotton, tobacco, rice, fats and oils, seed potatoes, certain fruits, tree nuts, and other products that usually are produced here in excess of normal domestic needs. The men assigned to this work officially represent the United States Government in contacting foreign government agencies, exporters, importers, and consumer groups abroad.

Among the studies which have been made so far are these:

The cotton situation in Western Europe, Japan, China, India, Pakistan, and Brazil;

The tobacco situation in Europe and Latin American countries;

The rice situation in Western Europe, the Far East, Near East, Egypt, South America, and Cuba; The fats and oils situation in Europe, South Africa, and British East Africa.

The field-crop and vegetable-seed situation in the United Kingdom, Western Germany, Czechoslovakia, and Austria.



CONSUMER PREFERENCES

IF GROWERS, processors, shippers, wholesalers, retailers, and other handlers of farm products are to meet more completely and efficiently the needs of consumers, more information must be obtained as to what consumers want in terms of quality and quantity.

The collection of such information, commodity by commodity, is the objective of Research and Marketing Act studies which began in September 1947.

A national survey to determine consumer likes and dislikes, methods of preparation, and buying habits, concerning potatoes has been completed. The results have been published and widely distributed to potato growers and handlers and to nutritionists, dietitians and others who might use this information to good advantage. The results of a similar survey concerning restaurant and hotel use of potatoes have also been published and distributed.

Other studies of consumer preferences that have been completed or are progressing include:

Men's preferences among selected items of clothing; citrus preferences among household consumers; consumer preferences concerning rice; consumer preferences for deciduous fruit; men's preferences among woolsens, worsteds, and weaves; and consumer preferences among three types of canned blended citrus juices.

Various Federal and State agencies are cooperating with the Department's Bureau of Agricultural Economics in this survey work.

THE FARMER AND BETTER FOOD FOR THE CONSUMER



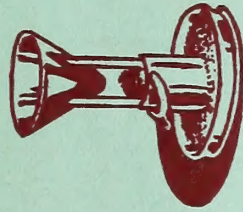
COSTS AND MARGINS

Very little is generally known about costs and margins that apply to various commodities as they move through the marketing system. In an effort to provide a basis for suggesting ways and means of increasing efficiency in marketing farm products and reducing the price spread between producer and consumer, a rather comprehensive effort is being made to obtain and analyze cost and margin data.

Several studies in this field have been completed, one of which, for example, had to do with the costs of marketing South Carolina grown tomatoes in the New York area. It showed just what part of the consumer's dollar went to the grower and how much went for grading, packing, and assembly; for inter-market transportation; for costs of first sale; and the combined margin for retail and wholesale. The study also showed that about 8 pounds out of every 30-pound lug didn't reach the consumer because of decay, insect damage, bruises, etc. This loss in the marketing channel is one reason why the price paid by the consumer was much higher than that received by the producer.

Other cost and margin studies completed or on the way include:

Farm-to-retail margins for white flour and bread; with a similar study under way for livestock and meats. The marketing of Western-grown turkeys in certain metropolitan areas, and the efficiency of marketing fresh eggs produced in the Midwest are also included in this work.



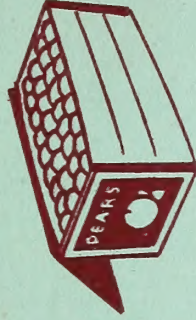
GRADES AND STANDARDS

It is quite generally agreed that a new look should be taken at our present system of grades and standards for many commodities to see what modifications are needed, if any, more adequately to meet the needs of producers, processors, distributors, and consumers.

One Research and Marketing Act project in this field aims to provide a quick, simple way to measure the bread-baking qualities of wheat—one that can be applied by all licensed grain inspectors and become a part of the official U. S. grain standards for wheat. Work so far indicates that the so-called sedimentation test devised by the Grain Branch of the Production and Marketing Administration might be the answer to the problem.

In the past, wheat has been marketed largely on the basis of its protein content, since this factor is recognized as a yardstick of bread baking quality. But protein tests are not used in the inspection of wheat under United States grade standards because the tests are too time-consuming and require rather elaborate and expensive equipment. The sedimentation test can be made quickly and with relatively simple equipment. If proven adaptable, this test might provide a service whereby farmers producing high quality wheat would be more likely to get premiums to which they are entitled.

Similar research is well advanced toward developing rough-rice standards that will reflect milling yield in terms of quality and value.



PACKAGING

GREATER EFFICIENCY and more basic information with regard to packaging and methods of handling packaged products suggests another opportunity for getting higher quality products to consumers at less cost. Accordingly, several Research and Marketing Act projects are aimed at developing improved containers and methods of packaging.

On the basis of 41 carloads of peaches shipped in Spartan wire-bound boxes and 41 cars shipped in bushel baskets under comparable conditions, one project disclosed that container damage in transit was only 0.64 percent for the boxes as compared with 3.13 percent for baskets. Another phase of this study, involving over 4,000 cars of peaches packed in baskets, showed that there was no significant difference in damage between the loads packed three layers high, the usual method of loading, and those packed four layers high. Obviously, the four-layer load would mean a saving to the carrier, a substantial part of which might well go into reducing the producer-to-consumer price spread for peaches.

With regard to prepackaging perishable food products, efforts are being directed along these lines: Developing and adapting conveyor and bagging equipment for prepackaging apples; determining comparative salability of produce in mesh bags, window cartons, transparent bags, and overwrapped food trays; and evaluating comparative returns to growers marketing produce in prepackaged versus bulk form.

FACTS ABOUT THE RMA PROGRAM

PROJECTS

Since the end of July 1947 when funds first became available under the Research and Marketing Act, approximately 225 projects have been initiated, all of which are directed at 13 broad objectives in the fields of production, utilization, and marketing research.

Projects relating to farm production and better rural living fall into these four general categories: (1) Improved use of basic resources; (2) reducing production hazards and risks; (3) improving farm buildings and facilities; (4) improving rural homes and rural living.

Utilization research falls into three broad categories, as follows: (1) Developing new and improved uses for farm products or byproducts; (2) extending food uses through improved nutrition; and (3) extending uses through better quality and processing techniques.

Nearly half of all projects initiated so far pertain to marketing research and services and come under these six broad headings: (1) Collection and reporting of basic market information; (2) expansion of outlets for farm products; (3) marketing services and costs and margins; (4) improvements in the preparation and handling of farm products; (5) evaluation and improvement of the marketing system; and (6) regional marketing research.

FUNDS

Under the various sections of the RMA a total of 9½ million dollars was authorized for fiscal year 1947, with succeeding annual authorizations increasing to a total of 61 million dollars through 1951. No funds were appropriated for 1947, however, be-

cause the act was not passed until near the close of the Seventy-ninth Congress.

Nine million dollars were appropriated for fiscal year 1948 and allocated as follows: 2½ million as direct grants to the State experiment stations (Section 9 of Title I) for all types of State or cooperative research; 3 million to the United States Department of Agriculture for utilization research (Section 10 (a) of Title I); 1½ million to the United States Department of Agriculture for cooperative research with the States other than utilization (section 10 (b) of title I) and 2 million to the United States Department of Agriculture for marketing research and services (title II).

The \$13,850,000 appropriated for fiscal year 1949 was allocated as follows: \$3,250,000 as direct grants to the State experiment stations; \$3,900,000 to the United States Department of Agriculture for utilization research; \$1,950,000 to the United States Department of Agriculture for cooperative research other than utilization; and \$4,750,000 to the United States Department of Agriculture for marketing research and services.

WHERE RESEARCH IS DONE

All research and marketing-service work under the Research and Marketing Act is conducted by or is under the supervision of the existing Federal or State agencies best equipped and qualified to do it. No research is performed by the administrator's staff. Its responsibility is to develop a program that is consistent with the intent of the act, with the advice of a wide range of groups and individuals who have first-hand knowledge of our most urgent

agricultural production, utilization, and marketing problems.

CONTRACTS AND COOPERATIVE AGREEMENTS

Under the contracting provisions of the act, some 72 research contracts have been approved involving approximately 1¾ million dollars (as of June 30, 1949). These contracts may run for whatever period is required to complete the job at hand but not to exceed 4 years.

One example of contract work involves the collection of detailed loss and damage data on approximately 50,000 carloads of oranges, grapefruit, tomatoes, celery, cauliflower, lettuce, and dressed beef. The results, as soon as they can be tabulated and classified as to shipping areas, methods of loading and bracing, and types of containers and equipment used, will be made widely available to all handlers of the products involved.

Twenty-eight cooperative agreements were in effect with agencies of 25 States in June 1949 under the provisions of the Act which permit the United States Department of Agriculture to match State agency funds to conduct marketing service types of work.

The participating States are listed below in the order in which they signed cooperative agreements: Virginia, North Carolina, West Virginia, Maine, Kansas, Wisconsin, Tennessee, Massachusetts, Illinois, Maryland, Louisiana, California, Iowa, Oklahoma, Utah, Indiana, New York, Michigan, Arkansas, South Carolina, Alabama, Washington, Kentucky, Mississippi, and South Dakota.

THE AGRICULTURAL RESEARCH POLICY COMMITTEE

Title III of the Research and Marketing Act directs the Secretary of Agriculture to establish an 11-man national advisory committee to consult with him and other appropriate officials of the Department concerning research and service work authorized by the Act and to assist in obtaining the cooperation of producers, farm organizations, industry groups, and Federal and State agencies. The Secretary or an official of the Department designated by him is chairman of the national advisory group, which is now known as the Agricultural Research Policy Committee.

Six members of this Committee must represent producers or their organizations and none is to be considered employees of the Department. They re-

ceive no compensation except for traveling expenses and subsistence in attending duly called meetings which are held quarterly or oftener.

More specifically, the function of the Agricultural Research Policy Committee, as redefined by the Committee and approved by the Secretary of Agriculture at its first quarterly meeting in 1949 (March 28-30), is to advise the Secretary of Agriculture, with special reference to the Research and Marketing Act, in establishing over-all agricultural policies governing research and the educational and service programs through which research findings are carried to the people. The goal of these activities, as stated by the Committee, is the improvement of our

agricultural economy in the interest of the general welfare through programs which provide for:

1. The supply of food, fiber, and other agricultural products needed to constantly improve the standard of living of the American people;
2. Conserving and improving the soil, water, and other agricultural resources of the Nation;
3. Maintaining desirable ratios of soil-building to soil-depleting crops and of livestock numbers to human populations;
4. Increasing the efficiency of producing and marketing agricultural products;
5. A fair income and living standard for the American farmer in relation to other groups so that he may continue to feed and clothe the Nation.

COMMODITY AND FUNCTIONAL ADVISORY COMMITTEES

At its first meeting in December 1946 the National Research and Marketing Act advisory group recommended that certain commodity and functional committees be named as authorized in Title III of the Act. Accordingly, the following commodities are represented by men who produce, process, and/or merchandise the particular commodity: Citrus fruit, cotton, cottonseed, dairy, deciduous fruit, dry beans and peas, feed, flaxseed, grain, livestock, peanuts, potatoes, poultry, rice, seeds, soybeans, sugar, tobacco, tree nuts, vegetables, and wool. Three functional or cross-commodity committees are active for cold storage, foreign trade, and transportation.

The function of these committees, with respect to their particular commodity, is to act in an advisory capacity to officials of the Department in carrying out the general purposes of the Act by:

1. Presenting problems confronting agriculture and agricultural industries which, in their judgment, merit research and service;
2. Recommending fields of work and indicating the relative importance of each;
3. Reviewing progress made under the Act with representatives of agencies responsible for conducting the work;
4. Assisting in obtaining the cooperation of producers, farm organizations, industry groups, and

others in the furtherance of Research and Marketing Act research and service programs, particularly regarding the application of results;

5. Aiding in securing an understanding among the various segments of the industry represented of the purposes, programs, and accomplishments under the Research and Marketing Act.

Committee members are appointed to serve for 1 year, or until successors are appointed. They are selected on the basis of their knowledge of problems affecting the production, utilization, or marketing of the commodities they represent and their broad interest in agricultural research or services that will contribute most to the general welfare of the country.

[illegible]